


SAFETY DATA SHEET

Section 1 - Identification

Product Identifier	TWISTER™ Mineral Deposit / Grout Film Remover RTU (1-5)
Other means of identification	2517 (1-5)
Recommended use	Mineral Deposit / Cement Film Remover
Recommended restrictions	For commercial and industrial use only.
Manufacturer / Importer / Supplier / Distributor Information	
Company Name	National Chemical Laboratories of PA, Inc.
Address	401 N. 10th Street - Philadelphia, PA 19123
Telephone	1 (215) 922-1200
Supplier Email	info@nclonline.com
Contact	CHEM-TEL
Emergency Phone	1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

	Classification	Category
Physical Hazards	Not Classified	
Health Hazards	Serious eye damage/eye irritation	1
	Skin corrosion/irritation	1B
OSHA defined hazards	Not Classified.	
Label Elements		
Hazard Symbol		
Signal Word	Danger	
Hazard Statement	Causes severe skin burns and eye damage. May cause respiratory irritation.	
Precautionary statement		
Prevention	Keep only in original container. Use only in a well-ventilated area. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.	
Storage	Store locked up. Store in corrosive resistant container with a resistant inner liner	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	None known.	

Section 3 - Composition/Information on ingredients

Mixture			
Hazardous Components	Ingredient Name	CAS #	%
	Hydrochloric Acid	7647-01-1	0.1 - 2

Section 4 - First-aid Measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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Most Important symptoms /effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5 - Fire-fighting measures

Suitable extinguishing media	RTU product will not support combustion. Water fog. Foam. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, Corrosive vapors and gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment /instructions	Move containers from fire area if you can do it without risk.
General fire hazards	No unusual fire or explosion hazards noted.
Specific Methods	Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures.	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Should not be released into the environment. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and storage

Precautions for safe handling	Do not breathe the mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Section 8 - Exposure control/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Hydrochloric Acid (CAS 7647-01-1)	TWA	7 mg/m ³ , 5 ppm	

US. ACGIH Threshold Limit Values

Component	Type	Value	Form
Hydrochloric Acid (CAS 7647-01-1)	TLV-C	2ppm, URT irr	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection If use of product risks exposure to contact, wear safety glasses with side shields.

Skin protection

Hand protection Impervious gloves are recommended for prolonged use.

Other If use of product risk exposure to contact, wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. No personal respiratory protective equipment normally required if used with adequate ventilation.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

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General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 - Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Clear, thin liquid.
Color	Colorless.
Odor	Slight, irritating odor.
Odor threshold	Not available.
pH	<1
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	None to boiling.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Similar to water.
Vapor density	Similar to water.
Relative density	1.01 ± 0.01
Relative density temperature	75 °F (23.9 °C)
Solubilities (water)	Completely soluble
Partition Coefficient n-octanol/water	Not available.
Auto-ignition temperature	Not Available.
Decomposition temperature	Not Available.
Viscosity	< 10 cSt
Viscosity Temperature	75 °F (23.9 °C)

Section 10 - Stability and reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Bases. Amines. Alkanolamines, Isocyanates, Copper, Metals, Oxidizing or Reducing agents.
Hazardous Decomposition Products	Hydrogen chloride.

Section 11 - Toxicological information

Information on likely routes of exposure

Ingestion	Causes digestive tract burns.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects.

Acute toxicity	May be harmful if swallowed.				
Components	Level	Type	Code	Species	Results
Hydrochloric Acid (CAS 7647-01-1)	Acute	Dermal	LD50	Rabbit	>5010 mg/kg
	Acute	Oral	LD50	Rat	700 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/ eye irritation	Causes serious eye damage.
Respiratory sensitization	Not a respiratory sensitizer.

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Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

Section 12 - Ecological Information

Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.			
Component(s)	Hydrochloric Acid, 7647-01-1			
Aquatic				
Level	Type	Code	Species	Test Results
Acute	Fish	LC50	Leuciscus idus	862 mg/l, 48 hours
Persistence and degradability	No data is available on the degradability of this product.			
Bioaccumulative potential	Not established.			
Mobility in soil	No data available.			
Mobility in general	No data available.			
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.			

Section 13 - Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Waste codes should be assigned by the user based on the application for which the product was used.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

General Information	This product is customer diluted for on site use only. No transportation information is anticipated or provided. The regulatory transport classification of the product without consideration to dilution strength, packaging, quantity, or modal restrictions and exceptions can not be anticipated. It is the user's responsibility to determine the appropriate packaging and modal requirements and/or limitations for the product quantity being shipped.
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Section 15 - Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.				
TSCA Section 12(b) Export Notification (40 CFR707, Subpt. D)	Not regulated.				
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.				
CERCLA Hazardous Substance List (40 CFR 302.4)					
Components	Result				
Hydrochloric Acid (CAS 7647-01-1)	LISTED				
Superfund Amendments and Reauthorization Act of 1986 (SARA)					
Hazard Categories	Immediate Hazard	Yes			
	Delayed Hazard	No			
	Fire Hazard	No			
	Pressure Hazard	No			
	Reactivity Hazard	Yes			
SARA 302 Extremely hazardous substance					
Chemical name	CAS #	Reportable Quantity	Threshold Planning Quantity	Threshold Planning quantity, lower value	Threshold Planning quantity, upper value
Hydrochloric Acid	7647-01-1	5000	500		

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SARA 311/312 Hazardous chemical Yes
 SARA 313 (TRI reporting)

Chemical name	CAS #	% by wt.
Hydrochloric Acid	7647-01-1	0.1 - 2

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) List

Components
 Hydrochloric Acid (CAS 7647-01-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Hydrochloric Acid (CAS 7647-01-0).

Drug Enforcement Administration (DEA), List 1 2 Hydrochloric Acid (CAS 7647-01-0) 20

Exempt Chemical Mixtures (21 CFR 1310.12(c)) %WV

DEA Exempt Chemical Mixtures Code Number Hydrochloric Acid (CAS 7647-01-0)
 6545

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US.Massachusetts RTK - Substance List Components
 Hydrochloric Acid (CAS 7647-01-1)

US.New Jersey Worker and Community Right-to-Know Act Components
 Hydrochloric Acid (CAS 7647-01-1)

US.Pennsylvania RTK - Hazardous Substances Components
 Hydrochloric Acid (CAS 7647-01-1)

US.Rhode Island RTK Components
 Hydrochloric Acid (CAS 7647-01-1)

US - California Proposition 65 This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

International Inventories

Country(s) or region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances	Yes
Unites States Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

*A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16 - Other information, including date of preparation or last version

Revision date 1/17/2018

Version # 02

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